CLAIMS

1. A network managing method for managing a network system composed by connecting buses having at least one node connected with a first bridge to form a sub-network, and connecting plural sub-networks with a second bridge,

wherein a network manager selected from sub-network managers specified in each of said sub-networks at least manages to assign each sub-network with an address and manages to set communication path between respective sub-networks.

2. A network managing method of claim 1,

wherein the network manager is one highest in the manager capability among said sub-network managers.

3. A network managing method of claim 1,

wherein each sub-network manager has a parameter showing its own manager capability, and identification data intrinsic to an appliance for composing the manager.

4. A network managing method of claim 2,

wherein a process for selecting the one having the highest manager capability is to select one highest in the capability by comparing parameters showing own manager capabilities possessed by respective sub-network managers.

5. A network managing method of claim 4,

wherein one sub-network manager is selected as a network manager by comparing the identification data intrinsic to each appliance in a specified state when the parameters showing the manager capability are identical.

6. A network managing method of claim 1,

wherein management by said network manager is to select a sub-network manager highest in the capability as the network manager in communication between adjacent sub-networks.

7. A network managing method of claim 1,

wherein a parameter showing the own manager capability and identification data intrinsic to the appliance for composing the manager are transmitted between adjacent sub-network managers.

8. A network managing method of claim 7,

wherein one sub-network manager is selected by comparing between two sub-network managers in transmission of said parameters and identification data between adjacent sub-network managers,

other sub-network manager not selected inherits parameter and identification data from the selected sub-network

manager, and

a subsequent comparison of adjacent sub-network parameters is performed based on the inherited data used as its own parameter and identification data.

9. A network managing method of claim 7,

wherein one sub-network manager is selected as a parent by comparing between two sub-network managers in transmission of said parameters and identification data between adjacent sub-network managers, and

other sub-network manager not selected is regarded as a child.

10. A network managing method of claim 9,

wherein if capability parameters and identification data of both sub-network managers are identical in said comparison, the data are assumed to be inherited from the same parent sub-network manager, and the parent-child relation is disregarded.

11. A network managing method of claim 10,

wherein if a relation with one adjacent sub-network manager is parent, and there is no other adjacent sub-network manager, an end command is transmitted to the parent sub-network manager.

12. A network managing method of claim 10,

wherein if a relation with one adjacent sub-network manager is parent, and a relation with the remaining adjacent sub-network manager is indifferent to parent-child relation or child, and an end command is received from all children, an end command is transmitted to the parent sub-network manager.

13. A network managing method of claim 10,

wherein if a relation with all adjacent sub-network managers is indifferent to parent-child relation or child, and an end command is received from all children, an own sub-network manager is judged to be a network manager.

14. A network managing method of claim 7, comprising:

a first command for sending out a capacity parameter and intrinsic identification data as a communication command in transmission between adjacent sub-network managers, and demanding 1:1 comparison with an adjacent sub-network manager, and

a second command for comparing in response to said first command, and reporting its result.

15. A network managing method of claim 14,

wherein, in case of having said first command and second command, it is judged whether the second command is valid or not

by setting a specified counter value and comparing between both sub-network managers of the set value.

16. A network managing method of claim 13,

wherein a sub-network manager judging itself to be a network manager transmits a selection end command indicating selected as a network manager to all adjacent sub-networks, and

a sub-network managers receiving the data indicating selection as the network manager transmits a selection end command to all adjacent child sub-network managers.

17. A selecting method of network manager for selecting a network manager for managing an entire network system, in a network system composed by connecting buses having at least one node connected with a first bridge to form a net-network, and connecting plural sub-networks with a second bridge,

wherein said network manager is selected from sub-network managers specified in each one of said sub-networks by a specified process.

18. A selecting method of network manager of claim 17,

wherein the network manager selects one highest in the manager capability among said sub-network managers.

19. A selecting method of network manager of claim 17,

wherein each sub-network manager has a parameter showing its own manager capability, and identification data intrinsic to an appliance for composing the manager, and select a network manager according to the parameter and identification data.

20. A selecting method of network manager of claim 18, wherein a process for selecting the one having the highest manager capability is to select one highest in the capability by comparing the parameters showing own manager capabilities possessed by each sub-network manager.

21. A selecting method of network manager of claim 20, wherein one sub-network manager is selected as a network manager by comparing identification data intrinsic to each appliance in a specified state when the parameters showing the manager capability are identical.

22. A selecting method of network manager of claim 17, wherein a network manager is selected by judging a sub-network manager of the highest capability in communication between adjacent sub-networks.

23. A selecting method of network manager of claim 17, wherein a parameter showing an own manager capability and identification data intrinsic to an appliance for composing

the manager are transmitted between adjacent sub-network managers, and a sub-network manager appropriate as a network manager is selected.

24. A selecting method of network manager of claim 23,

wherein one sub-network manager is selected by comparing between two sub-network managers in transmission of said parameters and identification data between adjacent sub-network managers,

other sub-network manager not selected inherits parameter and identification data from the selected sub-network manager, and

a subsequent comparison of adjacent sub-network managers is based on the inherited data used as own parameter and identification data.

25. A selecting method of network manager of claim 23,

wherein one sub-network manager is selected as a parent by comparing between two sub-network managers in transmission of said parameters and identification data between adjacent sub-network managers, and

other sub-network manager not selected is regarded as a child.

26. A selecting method of network manager of claim 25,

wherein if capability parameters and identification data of both sub-network managers are identical in said comparison, data are assumed to be inherited from the same parent sub-network manager, and the parent-child relation is disregarded.

27. A selecting method of network manager of claim 26, wherein if a relation with one adjacent sub-network manager is parent, and there is no other adjacent sub-network manager, an end command is transmitted to a parent sub-network manager.

28. A selecting method of network manager of claim 26, wherein if a relation with one adjacent sub-network manager is parent, and a relation with the remaining adjacent sub-network manager is indifferent to parent-child relation or child, and an end command is received from all children, an end command is transmitted to the parent sub-network manager.

29. A selecting method of network manager of claim 26, wherein if a relation with all adjacent sub-network managers is indifferent to parent-child relation or child, and an end command is received from all children, an own sub-network manager is selected to be a network manager.